

**DECLARATION
AND POWER OF ATTORNEY
Utility Application**

As a below named inventor, I hereby declare that:

My residence, post office address and citizenship are as stated below next to my name.

I believe I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention **PERMEATION LAYER ATTACHMENT CHEMISTRY AND METHOD** the specification of which

(Check One) is attached hereto OR
 was filed on _____ as United States Application Serial No. _____;
PCT International Application No. _____
and was amended on _____ (if applicable).

I hereby state that I have reviewed and understand the contents of the above-identified specification, including the claims, as amended by any amendment(s) referred to above.

I acknowledge the duty to disclose information which is material to the patentability of this application in accordance with Title 37, Code of Federal Regulations, § 1.56.

I hereby claim foreign priority benefits under Title 35, United States Code, § 119(a)-(d) or § 365(b) of any foreign application(s) for patent or inventor's certificate, or § 365(a) of any PCT international application which designated at least one country other than the United States of America, listed below and have also identified below, by checking the box, any foreign application for patent or inventor's certificate, or of any PCT international application having a filing date before that of the application on which priority is claimed.

Prior Foreign Application Number(s)	Country	Date of Filing	Priority Claimed	
			Yes	No

I hereby claim the benefit under Title 35, United States Code §119(e) of any United States provisional application(s) listed below.

Application Number(s)	Filing Date

I hereby claim the benefit under Title 35, United States Code, § 120 of any United States application(s), or § 365(c) of any PCT international application designating the United States of America, listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States or PCT international application in the manner provided by the first paragraph of Title 35, United States Code, § 112, I acknowledge the duty to disclose information which is material to patentability as defined in Title 37, Code of Federal Regulations § 1.56 which became available between the filing date of the prior application and the national or PCT international filing date of this application.

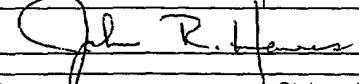
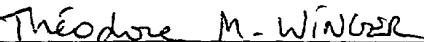
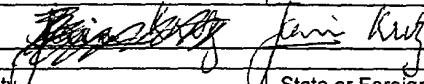
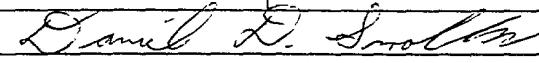
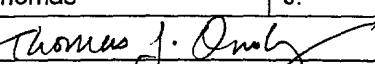
U.S. Parent Application Number	PCT Parent Number	Parent Filing Date	Status-Patented, Pending or Abandoned

POWER OF ATTORNEY: As a named inventor, I hereby appoint as my attorneys and/or agents, with full power of substitution and revocation, to prosecute this application and transact all business in the Patent and Trademark Office connected therewith: Roland N. Smoot, Reg. No. 18,718; Conrad R. Solum, Jr. Reg. No. 20,467; James W. Geriak, Reg. No. 20,233; Robert M. Taylor, Jr., Reg. No. 19,848; Samuel B. Stone, Reg. No. 19,297; Douglas E. Olson, Reg. No. 22,798; Robert E. Lyon, Reg. No. 24,171; Robert C. Weiss, Reg. No. 24,939; Richard E. Lyon, Jr., Reg. No. 26,300; John D. McConaghy, Reg. No. 26,773; William C. Steffin, Reg. No. 26,811; Coe A. Bloomberg, Reg. No. 26,605; J. Donald McCarthy, Reg. No. 25,119; John M. Benassi, Reg. No. 27,483; James H. Shalek, Reg. No. 29,749; Allan W. Jansen, Reg. No. 29,035; Robert W. Dickerson, Reg. No. 29,914; Roy L. Anderson, Reg. No. 30,240; David B. Murphy, Reg. No. 31,125; James C. Brooks, Reg. No. 29,898; Jeffrey M. Olson, Reg. No. 30,790; Steven D. Hemminger, Reg. No. 30,755; Jerrold B. Reilly, Reg. No. 32,293; Paul H. Meier, Reg. No. 32,274; John A. Rafter, Jr., Reg. No. 31,653; Kenneth H. Ohriner, Reg. No. 31,646; Mary S. Consalvi, Reg. No. 32,212; Lois M. Kwasigroch, Reg. No. 35,579; Lawrence R. LaPorte, Reg. No. 38,948; Robert C. Laurenson, Reg. No. 34,206; Bradford J. Duft, Reg. No. 32,219; Suzanne L. Biggs, Reg. No. 30,158; Richard J. Warburg, Reg. No. 32,327; John M. Johnson, Reg. No. 33,334; Daniel M. Chambers, Reg. No. 34,561; Troy M. Schmelzer, Reg. No. 36,667; Daniel N. Yannuzzi, Reg. No. 36,727; Jessica R. Wolff, Reg. No. 37,261; Howard N. Wisnia, Reg. No. 37,502; Douglas C. Murdock, Reg. No. 37,549; Jeffrey W. Guise, Reg. No. 34,613; F.T. Alexandra Mahaney, Reg. No. 37,668; Charles S. Berkman, Reg. No. 38,077; Edward M. Jordan, Reg. No. 40,666; John C. Kappos, Reg. No. 37,861; Keith Kind, Reg. No. 42,735; Daniel N. Yanuzzi, Reg. No. 36,727; Stephen S. Korniczky, Reg. No. 34,853; Jonathan T. Losk, Reg. No. 39,755; Theodore S. Maceiko, Reg. No. 35,593; Hope E. Melville, Reg. No. 34,874; Jeffrey A. Miller, Reg. No. 35,874; Kurt T. Mulville, Reg. No. 37,194; Clarke W. Neumann, Reg. No. 39,789; Vicki Norton, Reg. No. 40,745; Kenneth S. Roberts, Reg. No. 38,283; Thomas R. Rouse, Reg. No. 40,793; James K. Sakaguchi, Reg. No. 41,285; James K. Sakaguchi, Reg. No. 41,285; Carol A. Schneider, Reg. No. 34,923; Sheryl R. Silverstein, Reg. No. 40,812; Brent D. Sokol, Reg. No. 38,621; Jeffrey D. Tekanic, Reg. No. 36,031; Christopher A. Vanderlaan, Reg. No. 37,747; David E. Wang, Reg. No. 38,358; Lisa Ward Karmelich, Reg. No. 41,421; Michael J. Wise, Reg. No. 34,047; Wesley Ames, Reg. No. 40,893; Charles Balgenorth, Reg. No. 37,586; Thomas J. Brindisi, Reg. No. 40,348; James P. Brogan, Reg. No. 35,833; David T. Burse, Reg. No. 37,104; Bruce G. Chapman, Reg. No. 33,846; Farshad Farjami, Reg. No. 41,014; Charles C. Fowler, Reg. No. 39,675; and Corrine M. Freeman, Reg. No. 37,625.; of LYON & LYON, 633 West Fifth Street, Suite 4700, Los Angeles, California 90071-2066 telephone (619) 552-8400

Send Correspondence to: Douglas C. Murdock	LYON & LYON LLP 633 W Fifth St., Suite 4700 Los Angeles, CA 90071	Direct Telephone calls to: 619 552 8400
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Residence, post office address, citizenship and signature of inventor(s) set forth beginning on next page.

I further declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements are made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Title 18, United States Code, § 1001 and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

201	FULL NAME OF INVENTOR	FIRST Name Havens	MIDDLE Initial R.	LAST Name John
INVENTOR'S SIGNATURE 			DATE 12/15/99	
	RESIDENCE & CITIZENSHIP	City San Diego	State or Foreign Country California	Country of Citizenship U.S.A.
	POST OFFICE ADDRESS	5628 Lamas Street	City San Diego	State or Country Zip Code California 92122
202	FULL NAME OF INVENTOR	FIRST Name Theodore	MIDDLE Initial M.	LAST Name Winger
INVENTOR'S SIGNATURE 			DATE 12/15/99	
	RESIDENCE & CITIZENSHIP	City San Diego	State or Foreign Country California	Country of Citizenship France
	POST OFFICE ADDRESS	12475 Heatherton Court	City San Diego	State or Country Zip Code California 92128
203	FULL NAME OF INVENTOR	FIRST Name Jain	MIDDLE Initial	LAST Name Krotz
INVENTOR'S SIGNATURE 			DATE 12/15/99	
	RESIDENCE & CITIZENSHIP	City San Diego	State or Foreign Country California	Country of Citizenship India
	POST OFFICE ADDRESS	6913 Westleigh Place	City San Diego	State or Country Zip Code California 92126
204	FULL NAME OF INVENTOR	FIRST Name Smolko	MIDDLE Initial	LAST Name Dan
INVENTOR'S SIGNATURE 			DATE 12/15/99	
	RESIDENCE & CITIZENSHIP	City Jamul	State or Foreign Country California	Country of Citizenship U.S.A.
	POST OFFICE ADDRESS	20555 Bee Valley Road	City Jamul	State or Country Zip Code California 91935
205	FULL NAME OF INVENTOR	FIRST Name Thomas	MIDDLE Initial J.	LAST Name Onofrey
INVENTOR'S SIGNATURE 			DATE 12-15-1999	
	RESIDENCE & CITIZENSHIP	City San Marcos	State or Foreign Country California	Country of Citizenship U.S.A.
	POST OFFICE ADDRESS	570 520 Sonoma Street	City San Marcos	State or Country Zip Code California 92070-08
206	FULL NAME OF INVENTOR	FIRST Name	MIDDLE Initial	LAST Name
INVENTOR'S SIGNATURE _____			DATE _____	
	RESIDENCE & CITIZENSHIP	City	State or Foreign Country	Country of Citizenship
	POST OFFICE ADDRESS		City	State or Country Zip Code

ASSIGNMENT

For valuable consideration, we, John R. Havens of San Diego, California and a citizen of the U.S.A.; Theodore M. Winger of San Diego, California and a citizen of France; Jain Krotz of San Diego, California; a citizen of India and Dan Smolko of Jamul, California a citizen of the U.S.A. and Thomas J. Onofrey of San Marcos, California and a citizen of the U.S.A. (hereinafter referred to as "Assignors") hereby assign to NANOGEN, a corporation organized and existing under and by virtue of the laws of the State of Delaware and having its principal place of business at 10398 Pacific Center Court, San Diego, California 92121, and its successors and assigns (collectively hereinafter called "the Assignee"), the entire right, title and interest throughout the world in the invention and improvements which are the subject of an application for United States Patent filed herewith, U.S. Serial No. to be assigned and related applications and patents, entitled **PERMEATION LAYER ATTACHMENT CHEMISTRY AND METHOD**, this assignment including said application, any and all United States and foreign patents granted for any of said inventions or improvements, including all divisions, continuations, reissues, continuations-in-part and extensions thereof, and the right to claim priority based on the filing date of said application and based on the filing date of any provisional application of which said application claims the benefit under the International Convention for the Protection of Industrial Property, the Patent Cooperation Treaty, the European Patent Convention, and all other treaties of like purposes; and we authorize the Assignee to apply in all countries in our names or in its own name for patents and like rights of exclusion and for inventor's certificates for said inventions and improvements; and we agree for ourselves and our heirs, legal representatives and assigns, without further compensation, upon request to perform such lawful acts, to promptly provide Assignee with all pertinent facts and documents relating to said invention or application as may be known and accessible to us, to testify in any interference or litigation related to said invention or application and to sign such further applications, assignments, Preliminary Statements and other lawful documents as the Assignee may reasonably request to effectuate fully this Assignment.

The Assignors hereby covenant that no assignment, sale, agreement, or encumbrance has been or will be made or entered into which would conflict with this Agreement.

Patent
244/010

WITNESS my hand at SAN DIEGO, CA,
this 15th day of DECEMBER, 1999.

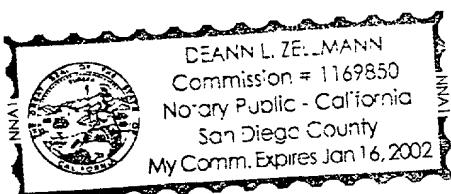
J. R. Havens
John R. Havens

STATE OF CALIFORNIA)
)
COUNTY OF SAN DIEGO) ss

On 12/15/99 before me, DEANN L. ZELLMANN, personally appeared
John R. Havens

personally known to me - OR - proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

WITNESS my hand and official seal.



Deann L. Zellmann
Notary Public in and for said County and State

Patent
244/010

WITNESS my hand at San Diego, California,
this 15th day of December, 1999.

Theodore M WINGER
Theodore M. Winger

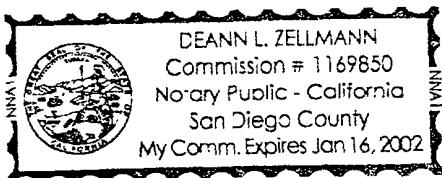
STATE OF CALIFORNIA)
)
COUNTY OF SAN DIEGO)

On 12/15/99 before me, DEANN L. ZELLMANN, personally appeared
Theodore M. Winger

personally known to me - OR - proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

WITNESS my hand and official seal.

Deann L. Zellmann
Notary Public in and for said County and State



Patent
244/010

WITNESS my hand at SAN DIEGO, CALIFORNIA,
this 15th day of DECEMBER, 1999.



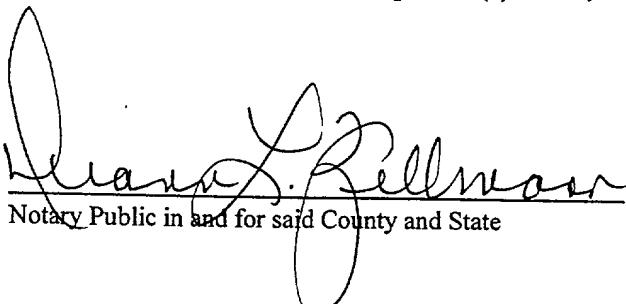
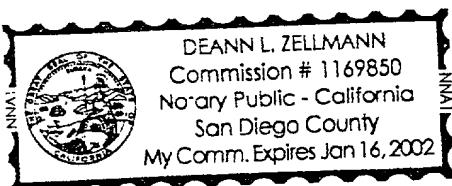
Jain Krotz

STATE OF CALIFORNIA)
) ss
COUNTY OF SAN DIEGO)

On 12/15/99 before me, DE ANN L. ZELLMANN, personally appeared
Jain Krotz

personally known to me - OR - proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

WITNESS my hand and official seal.



De Ann L. Zellmann
Notary Public in and for said County and State

Patent
244/010

WITNESS my hand at San Diego, CA,
this 15th day of December, 1999.

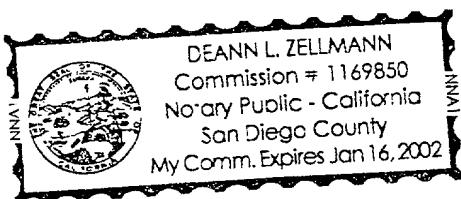
Dan Smolko
Dan Smolko

STATE OF CALIFORNIA)
) ss
COUNTY OF SAN DIEGO)

On 12/15/99 before me, DEANN L. ZELLMANN personally appeared
Dan Smolko

personally known to me - OR - proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

WITNESS my hand and official seal.



Deann L. Zellmann
Notary Public in and for said County and State

Patent
244/010

WITNESS my hand at SAN DIEGO CA,
this 15 day of DECEMBER, 1999.

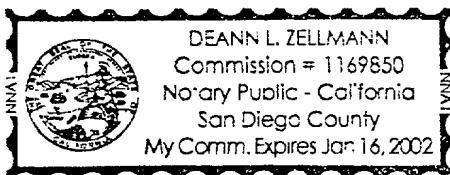
Thomas J. Onofrey
Thomas J. Onofrey

STATE OF CALIFORNIA)
)
COUNTY OF SAN DIEGO) ss

On 12/16/99 before me, DEANN L. ZELLMANN, personally appeared
Thomas J. Onofrey

personally known to me - OR - proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

WITNESS my hand and official seal.



Deann L. Zellmann
Notary Public in and for said County and State

POWER OF ATTORNEY
By Assignee

NANOGEN, INC., assignee(s) of the application for United States Letters Patent for an improvement in

Permeation Layer Attachment Chemistry and Method
by John Havens et al.

the specification of which:

- is filed herewith, OR
 was filed on December 15, 1999, having U.S. Patent Application Serial No. 09/464,670,

does hereby appoint as my attorneys and/or agents, with full power of substitution and revocation, to prosecute this application and transact all business in the United States Patent and Trademark Office, and in countries other than the United States, and to do all things necessary or appropriate therefor before any competent International Authorities in connection with any international patent application(s) corresponding to the above-identified application, all of the registered practitioners identified by Customer Number 22249:



22249
PATENT
TRADEMARK
OFFICE

LYON & LYON LLP
Suite 4700
633 W. Fifth Street
Los Angeles, CA 90071
(213) 489-1600

Please send all correspondence to the attention of David B. Murphy or Patrick S. Eagleman, at the above Customer Number, and direct all telephone calls to **David B. Murphy or Patrick S. Eagleman**.

I, the undersigned, declare that I have reviewed copies of the documentary evidence establishing chain of title to the patent application identified above from the inventor(s) to the assignee(s), which:

- is filed for recordation herewith; or
 was recorded at Reel 010486, Frame 0369; or
 has been sent for recordation under separate cover, copy attached herewith.

To the best of the undersigned's knowledge and belief, title is in the assignee(s) identified above. Furthermore, the undersigned is empowered to sign this document on behalf of the assignee(s).

Full Name of Assignee: NANOGEN, INC.	
Post Office Address: 10398 Pacific Center Court, San Diego, California 92121	
Signature of Declarant or Assignee: <i>Vera Pardee</i>	Date: 2/15/01
Full Name of Declarant	
If Other Than Assignee: Vera P. Pardee	
Title of Declarant: Vice President, Assistant General Counsel, and Assistant Secretary	
Address of Declarant: 10398 Pacific Center Court, San Diego, California 92121	

10398 Pacific Center Court
San Diego, California 92121